

REMARKS

In the Official Action mailed on **January 19, 2005**, the Examiner reviewed claims 1-4, 6-11, 13-18, and 20-24. Claims 1-4, 6-11, 13-18, and 20-24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Gosling (USPN 5,668,999, hereinafter “Gosling”) in view of Jagannathan et al. (USPN 6,496,871, hereinafter, “Jagannathan”).

Rejections under 35 U.S.C. §103(a)

Independent claims 1, 8, and 15 were rejected as being unpatentable over Gosling in view of Jagannathan. Applicant respectfully points out that Gosling teaches verifying operand data type compatibility and proper stack manipulations in a bytecode program **prior to the execution of the bytecode program** (see Gosling column 4, lines 48-53; column 11, lines 4-8). Furthermore, the bytecode verifier used for verification utilizes data structures that only store **data type information** (see Gosling column 5, line 33 to column 6, line 5; column 6, line 28-39). The data structures **do not contain actual data values and constants** (see Gosling column 5, line 35-40).

In contrast, the present invention teaches verifying type safety of an application snapshot, wherein the application snapshot includes the **state of an executing program** that is moved from a first computing device to a second computing device across a network in order to continue execution on the second computing device (see page 6, lines 19-21; page 7, lines 11-15; page 8, lines 9-11; page 9, line 11 to page 10, line 4; FIG. 1-3 of the instant application). Furthermore, this application snapshot contains a copy of an operand stack *wherein the operand stack contains operands currently being operated on by the executing subprogram* (see page 8, lines 8-25; FIG.2 of the instant application).

The benefit of including operands currently being operated on by the executing subprogram into the operand stack is that the subprogram can be

stopped on a first computing device, transferred to a second computing device, and restarted on the second computing device at the point where it was stopped on the first computing device. The combined invention of Gosling and Jagannathan does not store actual data values or constants in the verification data structure. It only stores data type information (i.e. integer, float, etc.). Therefore, it cannot be used to restart the program on another computing device.

Note that prior to execution of the program, there are no operands on the operand stack. Note that since Gosling verifies a bytecode program prior to execution, Gosling cannot possibly verify operands on the operand stack.

Hence, there is nothing within Gosling or Jagannathan, either separately or in concert, that suggests verifying type safety of an application snapshot, wherein the application snapshot includes an operand stack containing operands currently being operated on by the executing subprogram.

Accordingly, Applicant has amended independent claims 1, 8 and 15 to clarify that the present invention verifies type safety of an application snapshot, including an operand stack which contains *operands currently being operated on by the executing subprogram*. These amendments find support on page 6, lines 19-21; page 7, lines 11-15; page 8, lines 8-25; page 9, line 11 to page 10, line 4; FIG. 1-3 of the instant application.

Hence, Applicant respectfully submits that independent claims 1, 8, and 15 as presently amended are in condition for allowance. Applicant also submits that claims 2-4, 6-7, and 22, which depend upon claim 1, claims 9-11, 13-14, and 23, which depend upon claim 8, and claims 16-18, 20-21, and 24, which depend upon claim 15, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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